



GP/26858
12/30/02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: LYSANDER LIM ET AL.

Filed: FEBRUARY 13, 2002

For: APPARATUS AND METHODS FOR GENERATING RADIO
FREQUENCIES IN COMMUNICATION CIRCUITRY

RECEIVED

Serial No.: 10/075,098

DEC 26 2002

Group Art Unit: 2685

Technology Center 2600

Examiner: UNKNOWN

Atty Dkt: SILA:075

Pursuant to 37 C.F.R. 1.8, I certify that this correspondence is being deposited with the U.S. Postal Service in a first class, postage prepaid envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on the date below:

12-13-02 Marty Bomer
Date Name

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Pursuant to 37 C.F.R. §§ 1.56, 1.97, and 1.98, it is respectfully requested that this Information Disclosure Statement be entered and the document(s) listed on attached Form PTO-1449 be considered by the Examiner and made of record.

In accordance with 37 C.F.R. §§ 1.97(g),(h), this Information Disclosure Statement is not to be construed as a representation that a search has been made, and is not to be construed to be an admission that the information cited is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

The present Information Disclosure Statement is being filed prior to the receipt of a first Official Action reflecting an examination on the merits, and hence is believed to be timely filed in

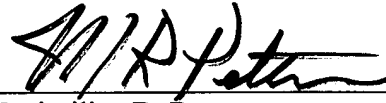
accordance with 37 C.F.R. § 1.97(b). No fees are believed to be due in connection with the filing of this Information Disclosure Statement, however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to these materials, the Commissioner is hereby authorized to deduct said fees from Deposit Account No. 10-1205/SILA:075.

Per 37 CFR 1.98(d), no copies of references A1-A48, B1-B6, C1-90 and C101 have been provided, as copies of these references have been previously submitted to the Office in one or more of co-pending U.S. Patent Application Serial Nos. 09/821,340 filed on March 29, 2001, which is entitled "Digital Interface In Radio-Frequency Apparatus And Associated Methods" and 09/821,342 filed on March 29, 2001, which is entitled "Partitioned Radio-Frequency Apparatus And Associated Methods" and which is relied upon by the present application for an earlier effective filing date under 35 U.S.C. Section 120.

A copy of the listed document(s) required by 37 C.F.R. § 1.98(a)(2) are enclosed for the convenience of the Examiner.

Applicant respectfully requests that the listed document(s) be made of record in the present case.

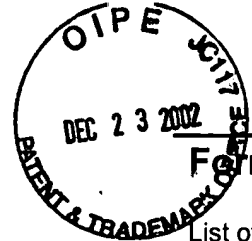
Respectfully submitted,

A handwritten signature in black ink, appearing to read 'M/R Peterson', written over a horizontal line.

Maximilian R. Peterson
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Attorney for Applicant

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Enclosures

**Form PTO-1449** (modified)

List of Patents and Publications for Applicant's

INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

Atty. Docket No.
SILA:075Serial No.
10/075,098Applicants
LYSANDER LIM ET AL.**RECEIVED****DEC 26 2002**Filing Date:
2/13/02Group:
2685**Technology Center 2600**U.S. Patent Documents
See Pages 1-6Foreign Patent Documents
See Page 7Other Art
See Pages 7-15**U.S. Patent Documents**

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date if App.
	A1	5,828,955	10/27/98	Lipowski et al.			8/30/95
	A2	6,035,186	3/7/00	Moore et al.			3/11/97
	A3	6,075,979	6/13/00	Holtvoeth et al.			3/5/97
	A4	5,764,171	6/9/98	Stikvoort			4/2/96
	A5	6,148,048	11/14/00	Kerth et al.			9/26/97
	A6	4,713,563	12/15/87	Marshall et al.			5/12/86
	A7	4,070,632	1/24/78	Tuttle			9/22/76
	A8	4,236,252	11/25/80	Kominami et al.			2/6/79
	A9	4,680,588	7/14/87	Cantwell			12/5/85
	A10	4,857,928	8/15/89	Gailus et al.			1/28/88
	A11	4,989,074	1/29/91	Matsumoto			9/21/89
	A12	5,050,192	9/17/91	Nawata			11/21/90
	A13	5,083,304	1/21/92	Cahill			9/28/90
	A14	5,142,695	8/25/92	Roberts et al.			3/21/91
	A15	5,194,826	3/16/93	Huusko			4/12/91
	A16	5,235,410	8/10/93	Hurley			7/10/91
	A17	5,267,272	11/30/93	Cai et al.			2/14/91
	A18	5,283,578	2/1/94	Ribner et al.			11/16/92
	A19	5,345,406	9/6/94	Williams			8/25/92
	A20	5,430,890	7/4/95	Vogt et al.			11/20/92
	A21	5,442,353	8/15/95	Jackson			10/25/93
	A22	5,451,948	9/19/95	Jekel			2/28/94
	A23	5,500,645	3/19/96	Ribner et al.			3/14/94

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2685**RECEIVED****DEC 2-6 2002****Technology Center 2000**U.S. Patent Documents
See Pages 1-6Foreign Patent Documents
See Page 7Other Art
See Pages 7-15**U.S. Patent Documents**

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date if App.
	A24	5,557,642	9/17/96	Williams			11/14/94
	A25	5,712,628	1/27/98	Phillips et al.			8/31/95
	A26	5,742,189	4/21/98	Yoshida et al.			9/14/95
	A27	5,862,465	1/19/99	Ou			12/30/96
	A28	5,973,601	10/26/99	Campana			12/2/97
	A29	5,758,276	5/26/98	Shirakawa et al.			5/31/96
	A30	5,740,524	4/14/98	Pace et al.			12/14/95
	A31	4,623,926	11/18/86	Sakamoto			11/9/836
	A32	5,341,135	8/23/94	Pearce			4/30/92
	A33	5,241,310	8/31/93	Tiemann			3/2/92
	A34	4,562,591	12/31/85	Stikvoort			2/2/84
	A35	5,243,345	2/21/92	Naus et al.			2/21/92
	A36	5,469,475	11/21/95	Voorman			5/31/91
	A37	4,912,729	3/27/90	Van Rens et al.			12/15/88
	A38	4,627,021	12/2/86	Persoon et al.			3/13/84
	A39	4,692,737	9/8/87	Stikvoort et al.			10/17/86
	A40	4,584,659	4/22/86	Stikvoort			7/5/83
	A41	4,797,845	1/10/89	Stikvoort			12/11/86
	A42	4,604,720	8/5/86	Stikvoort			3/16/84
	A43	5,157,343	10/20/92	Voorman			5/31/91
	A44	5,124,705	7/23/92	Voorman			7/10/91
	A45	4,468,790	8/28/84	Hofelt			2/16/82
	A46	5,859,878	1/12/99	Phillips et al.			8/31/95

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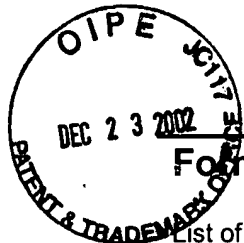
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See Page 7Other Art
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	A47	6,323,735	11/27/01	Welland et al.			5/25/00
	A48	6,167,245	12/26/00	Welland			5/29/98
	A49	6,388,536	5/14/02	Welland			6/27/00
	A50	6,147,567	11/14/02	Welland et al.			5/29/98
	A51	6,327,463	12/4/01	Welland			5/29/98
	A52	6,233,441	5/15/01	Welland			5/19/98
	A53	6,304,146	10/16/01	Welland			5/29/98
	A54	6,308,055	10/23/01	Welland et al.			5/29/98
	A55	6,150,891	11/21/00	Welland et al.			5/29/98
	A56	6,317,006	11/13/01	Welland et al.			7/21/00
	A57	6,137,372	10/24/00	Welland			5/29/98
	A58	6,226,506	5/1/01	Welland et al.			5/29/98
	A59	6,311,050	10/30/01	Welland et al.			5/29/98
	A60	4,179,670	12/18/79	Kingsbury			1/27/78
	A61	4,204,174	5/20/80	King			11/9/78
	A62	4,686,488	8/11/87	Attenborough			1/31/86
	A63	4,758,802	7/19/88	Jackson			2/21/86
	A64	5,055,802	10/8/91	Hietala et al.			4/30/90
	A65	5,079,521	1/7/92	Gaskell et al.			11/21/90
	A66	5,224,132	6/29/93	Goldberg			1/17/92
	A67	5,379,003	1/3/95	Bizen			12/9/93
	A68	5,446,767	8/29/95	Nakagawa et al.			4/20/93
	A69	5,517,534	5/14/96	Knierim			11/14/94

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Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date if App.
	A70	5,534,825	7/9/96	Goma et al.			4/28/95
	A71	5,539,359	7/23/96	Goma			3/29/95
	A72	5,576,667	11/19/96	Goma			11/21/95
	A73	5,581,584	12/3/96	Inoue et al.			7/20/94
	A74	3,571,743	3/23/71	Menkes			10/30/68
	A75	3,899,746	8/12/75	Gammel			9/14/73
	A76	4,009,448	2/22/77	Hopwood et al.			1/6/76
	A77	4,099,137	7/4/78	Alm, Jr. et al.			7/10/77
	A78	4,805,198	2/14/89	Stern et al.			5/19/87
	A79	4,888,564	12/19/89	Ishigaki			11/2/88
	A80	5,315,269	5/24/94	Fujii			7/31/92
	A81	5,495,205	2/27/96	Parker et al.			1/6/95
	A82	5,625,325	4/29/97	Rotzoll et al.			12/22/95
	A83	5,648,744	7/15/97	Prakash et al.			12/22/95
	A84	5,686,864	11/11/97	Martin et al.			9/5/95
	A85	5,739,730	4/14/98	Rotzoll			12/22/95
	A86	5,852,384	12/22/98	Sakakura et al.			4/18/97
	A87	5,856,763	1/5/99	Reeser et al.			3/5/97
	A88	5,936,474	8/10/99	Rousselin			3/28/97
	A89	5,157,358	10/20/92	Benson			11/20/91
	A90	4,205,272	5/27/80	Kumagai			4/13/78
	A91	4,980,653	12/25/90	Shepherd			9/5/89
	A92	5,909,150	6/1/99	Kostelnik et al.			10/23/97

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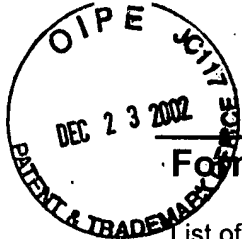
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See Page 7Other Art
See Pages 7-15**U.S. Patent Documents**

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date if App.
	A93	4,713,631	12/15/87	Enderby et al.			1/6/86
	A94	3,538,450	11/3/70	Andrea et al.			11/4/68
	A95	4,484,153	11/20/84	Borras et al.			4/6/81
	A96	4,602,220	7/22/86	Kurihara			8/14/85
	A97	4,893,087	1/9/90	Davis			1/7/88
	A98	4,905,306	2/27/90	Anderson			2/26/88
	A99	4,926,144	5/15/90	Bell			9/29/88
	A100	4,998,077	3/5/91	Nanni et al.			12/20/89
	A101	5,034,703	7/23/91	Schumacher			7/11/90
	A102	5,036,295	7/30/91	Kamitani			7/30/90
	A103	5,117,206	5/26/92	Imamura			12/4/90
	A104	5,175,884	12/29/92	Suarez			6/1/90
	A105	5,281,927	1/25/94	Parker			5/20/93
	A106	5,369,376	11/29/94	Leblebicioglu			11/29/91
/	A107	5,644,270	7/1/97	Moyer et al.			3/15/96
	A108	5,691,669	11/25/97	Tsai et al.			1/11/96
	A109	5,748,043	5/5/98	Koslov			5/3/94
	A110	5,808,531	9/15/98	Nakano			11/8/96
	A111	5,844,868	12/1/98	Takahashi et al.			3/26/97
	A112	5,867,069	2/2/99	Kiser			6/9/98
	A113	5,898,345	4/27/99	Namura et al.			7/14/97
	A114	5,963,100	10/5/99	Tolson et al.			2/24/98
	A115	5,705,955	1/6/98	Freeburg et al.			12/21/95

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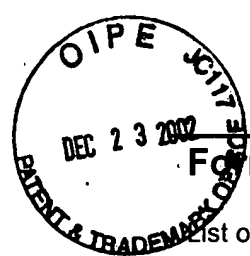
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U.S. Patent Documents
See Pages 1-6Foreign Patent Documents
See Page 7Other
See Pages 7-15**U.S. Patent Documents**

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	A116	4,926,140	5/15/90	Schenberg			7/19/89
	A117	5,038,117	8/6/91	Miller			9/7/90
	A118	5,258,720	11/2/93	Tanis et al.			3/2/84
	A119	5,258,724	11/2/93	Tanis et al.			12/30/83
	A120	5,661,269	8/26/97	Fukuzaki et al.			3/17/95
	A121	5,561,398	10/1/96	Rasmussen			5/16/95
	A122	5,619,148	4/8/97	Guo			10/10/95
	A123	6,016,332	1/18/00	Smith et al.			12/19/97
	A124	6,208,488	2/22/00	Landman et al.			10/30/97
	A125	6,130,577	10/10/00	Tamba et al.			6/11/96
	A126	3,983,485	9/28/76	Stuart			2/28/75
	A127	4,888,560	12/19/89	Ogura			7/15/88
	A128	4,255,714	3/10/81	Rosen			2/21/79
	A129	5,006,819	4/9/91	Buchan et al.			5/21/90
	A130	5,418,497	5/23/95	Martin			7/5/94
	A131	5,698,469	12/16/97	Mohwinkel et al.			3/6/95
	A132	5,949,291	9/7/99	Newland			1/21/98
	A133	4,057,760	11/8/77	Koch			6/7/76
	A134	5,831,482	11/3/98	Salvi et al.			3/3/97
	A135	5,351,014	9/27/94	Ichiyoshi			8/2/93

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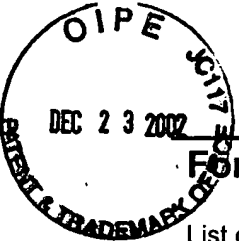
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	B1	WO 00/22735	4/20/00	Ali			
	B2	GB2233518A	1/9/91	Dedic			
	B3	0643477A2	3/15/95	Hulkko et al.			
	B4	WO 00/11794	3/2/00	Moore et al.			
	B5	WO 00/01074	1/6/00	Van Der Zwan et al.			
	B6	WO 99/22456	5/6/99	Grenabo			10/27/98
	B7	JP359127408 A	7/23/84	Shibata et al.			1/11/83
	B8	JP403258103 A	11/18/91	Kitamura et al.			3/8/90
	B9	JP402298107 A	12/10/90	Obayashi			5/12/89
	B10	JP403070202 A	3/26/91	Araki et al.			8/9/89
	B11	JP04035302 A	2/6/92				5/28/90

Other Art (Including Author, Title, Date, Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C1	Stephen Jantzi et al., "Quadrature Bandpass $\Delta\Sigma$ Modulation for Digital Radio," IEEE Journal of Solid-State Circuits, Vol. 32, No. 12, December 1997, pp. 1935-1950.
	C2	Stephen Jantzi et al., "A Complex Bandpass $\Delta\Sigma$ Converter For Digital Radio," ISCAS, May/June 1994, pp. 453-456.

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U.S. Patent Documents

See Pages 1-6

Foreign Patent Documents

See Page 7

Other Art

See Pages 7-15

Other Art (Including Author, Title, Date, Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C3	"Analog Devices Delivers World's First Open Market GSM Direct Conversion Radio Chipset," Analog Devices Corporate Information Press Release, http://contentanalog.com/pressrelease/prdisplay/0,1622,102,00.html , September 13, 1999, pp. 1-4.
	C4	Data Sheet, CX74017, "RF Transceiver for Single, Dual, or Tri-Band GSM/GPRS Applications," Conexant, January 2, 2001, pp. 1-16.
	C5	Jacques C. Rudell et al., "A 1.9-GHz Wide-Band IF Double Conversion CMOS Receiver for Cordless Telephone Applications," IEEE Journal of Solid-State Circuits, Vol. 32, No. 12, December 1997, pp. 2071-2088.
	C6	Jan Crols et al., "Low-IF Topologies for High-Performance Analog Front Ends of Fully Integrated Receivers," IEEE Transactions on Circuits and Systems-II: Analog and Digital Signal Processing, Vol. 45, No. 3, March 1998, pp. 269-282.
	C7	Jacques C. Rudell et al., "Recent Developments In High Integration Multi-Standard CMOS Transceiver for Personal Communication Systems," invited paper at the 1998 International Symposium on Low Power Electronics, Monterey, California, 6 pgs.
	C8	Asad Abidi, "CMOS Wireless Transceivers: The New Wave," IEEE Communications Magazine, August 1999, pp. 119-124.
	C9	Data Sheet, UAA3535HL, "Low Power GSM/DCS/PCS Multi-band Transceiver," Philips Semiconductors, February 17, 2000, pp. 1-24.
	C10	Stephen Jantzi et al., "FP 13.5: A Quadrature Bandpass $\Delta\Sigma$ Modulator for Digital Radio," Digest of Technical Papers, 1997 IEEE International Solid-State Circuits Conference, First Edition, February 1997, pp. 216-217, 460.
	C11	S. A. Jantzi et al., "The Effects of Mismatch In Complex Bandpass $\Delta\Sigma$ Modulators," IEEE, 1996, pp. 227-230.
	C12	Qiuting Huang, "CMOS RF Design-The Low Power Dimension," IEEE 2000 Custom Integrated Circuits Conference, pp. 161-166.
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SILA:075

Serial No.

10/075,098

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U.S. Patent Documents

See Pages 1-6

Foreign Patent Documents

See Page 7

Other Art

See Pages 7-15

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See Pages 1-6Foreign Patent Documents
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10/075,098

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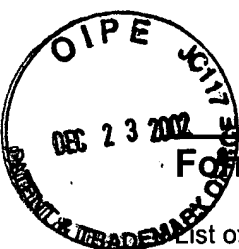
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See Pages 1-6Foreign Patent Documents
See Page 7Other Art
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See Pages 1-6Foreign Patent Documents
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SILA:075Serial No.
10/075,098**RECEIVED**Applicants
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2685U.S. Patent Documents
See Pages 1-6Foreign Patent Documents
See Page 7Other Art
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Form PTO-1449 (modified)

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INFORMATION DISCLOSURE STATEMENT

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Atty. Docket No.

SILA:075

Serial No.

10/075,098

Applicants

LYSANDER LIM ET AL.

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Filing Date:

2/13/02

Group:

2685

Technology Center 2600

U.S. Patent Documents

See Pages 1-6

Foreign Patent Documents

See Page 7

Other Art

See Pages 7-15

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SILA:075Serial No.
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2685U.S. Patent Documents
See Pages 1-6Foreign Patent Documents
See Page 7Other Art
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